REMARKS

No claims are being added, cancelled or amended. Claims 18-39 are pending in the application.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

The rejection of claims 18-39 under 35 U.S.C. §102(e).

Claims 18 to 39 were rejected under 35 U.S.C. §102(e) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. Anticipation requires that each element and interrelationship recited in a claim be disclosed explicitly or inherently in a single piece of prior art.

- **The Kamiyama reference does not explicitly anticipate Applicants' claims 18-24, 34 and 36-39.**

Pending claim 18 recites in one pertinent part: ". . . wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1." Claims 19-24, 34 and 36-39 depend directly or indirectly from claim 18.

The Kamiyama reference fails to explicitly disclose either filler particle size or Applicant's claimed ratio of filler particle size to polymer particle size. Thus, the Kamiyama reference can not explicitly anticipate claims 18-24, 34 and 36-39.

- **The Kamiyama reference does not inherently anticipate Applicants' claims 18 to 24, 34 and 36-39.**

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §§102 or 103. See MPEP §2112. However, "[t]he doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient . .

. A prior inherent event cannot be established based upon speculation . . ." Ethyl Molded Products Co. v. Betts Package Inc., 9 USPQ2d 1001, 1032-1033 (E.D. Ky. 1988). The Court of Appeals for the Federal Circuit has reinforced this position stating: "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). To rely on the theory of inherency in rejecting a claim under 35 U.S.C. §§102 or 103, ". . . the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Further, the chemical arts are known to be unpredictable so that a person of ordinary skill is cautious about extrapolating from teachings within those arts. See, for example, In re Marzocchi, 169 USPQ 367, 368-370 (CCPA 1971), acknowledging the unpredictability within the chemical arts. This caution in extrapolating from chemical teachings is especially true when, as in the present case, the Kamiyama reference does not disclose any filler particle size, any reason to use a particular filler particle size, any necessary or useful ratio of filler particle size to polymer particle size or any reason to use a particular ratio of filler particle size to polymer particle size.

- **The Examiner's assertions provide a huge range of ratios for filler particle size to polymer particle size.**

The Examiner asserts:

> Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that there is a ratio exist between the two filler materials or other ingredients.

Applicant agrees that the Kamiyama reference discloses polymer particle sizes within the range of 2 to 3 micrometers to 30 micrometers. See Kamiyama, column 6, lines 11-15. Applicant agrees that the product literature cited by the Examiner illustrates that silica powder can have a particle size of 0.2 micrometers to 600 micrometers. Using the polymer particle sizes of the Kamiyama reference and the silica particle sizes asserted by the Examiner it is theoretically possible to have a ratio of filler particle size to polymer particle size ranging from 0.2/30 or 0.0067:1 to 600/2 or 300:1. Thus, the Examiner's assertions provide a theoretically possible range of ratios for filler particle size to polymer particle size spanning almost five (5) orders of magnitude!

- **The Kamiyama reference does NOT disclose any reason to narrow the Examiner's huge range of ratios for filler particle size to polymer particle size.**

- The Kamiyama reference does NOT describe any particle size for the filler particles.
- The Kamiyama reference does NOT describe any reason to use a particular filler particle size.
- The Kamiyama reference does NOT disclose any particular ratio of filler particle size to polymer particle size.
- The Kamiyama reference does NOT disclose any reason to use a particular range for ratio of filler particle size to polymer particle size.

- **Applicant's claim only a very narrow range of ratios for filler particle size to polymer particle size.**

Pending claim 18 recites in one pertinent part: ". . . wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1."

- **It is more probable that the Kamiyama ratio for filler particle size to polymer particle size falls outside of Applicant's claimed range than within Applicant's claimed range.**

Applicant concedes that a ratio of filler particle size to polymer particle size must exist in the Kamiyama reference. However, it is simply not possible to discern that ratio from the Kamiyama reference because, in contrast to its description of the polymer particles, *it never provides any size for the filler particles!* The fact that the filler particle size *can* be measured does not change the fact that *it never was measured.*

Given the Examiner's huge, theoretically possible range of ratios for filler particle size to polymer particle size (0.0067:1 to 300:1) why **MUST** the Kamiyama material have a ratio of filler particle size to polymer particle size of 1.1:1 to 20:1 as claimed by Applicant? In fact, given the Examiner's huge, theoretically possible range of ratios for filler particle size to polymer particle size (0.0067:1 to 300:1) it appears statistically more probable that the Kamiyama ratio falls outside of Applicant's narrow ratio range than within Applicant's narrow ratio range.

The doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient to establish inherency. Following the teachings of the Kamiyama reference cannot inevitably lead to Applicant's claimed ratio of filler particle size to polymer particle size. In fact, it appears more probable that the Kamiyama ratio will be different that Applicant's claimed narrow ratio. This rejection is traversed. If the Examiner maintains this rejection he must explain why the Kamiyama reference NECESSARILY discloses a ratio of filler particle size to polymer particle size of 1.1:1 to 20:1 in view of the huge range of such ratios that the Examiner admits are theoretically possible. Applicant's pending claims 18-24, 34 and 36-39 are not anticipated by the Kamiyama reference and are patentable for at least this reason.

- **The Kamiyama reference does NOT teach the polymer particle diameter (d50) recited in claim 19.**

Claim 19 recites in one pertinent part: ". . . wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 μm."

The Kamiyama reference discloses minimum (not d50) polymer particle sizes of 5 μm (column 1, line 15) and "as small as 2 to 3 μm" (column 6, lines 11-15). The figures of Kamiyama teach a median polymer particle diameter of 5 μm or more. The Kamiyama reference does NOT teach the use of synthetic organic polymer particles having a diameter (d50) of 0.03 to 0.5 μm. Applicant's pending claim 19 is not anticipated by the Kamiyama reference and is patentable for at least this additional reason.

- **The Kamiyama reference does not explicitly anticipate Applicants' claims 25-33 and 35.**

Anticipation requires that each element and interrelationship recited in a claim be disclosed explicitly or inherently in a single piece of prior art. Pending claim 25 recites in one pertinent part: ". . . containing filler particles . . . with a particle size (d50) of 0.01 to 0.5 µm . . ." Claims 26-33 and 35 depend directly or indirectly from claim 25.

The Kamiyama reference fails to explicitly disclose ANY filler particle size. Thus, the Kamiyama reference can not explicitly anticipate claims 25-33 and 35.

- **The Kamiyama reference does not inherently anticipate Applicants' claims 25-33 and 35.**
  - **The Examiner's assertions provide a huge range of filler particle sizes.**

The Examiner asserts:

> Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that there is a ratio exist between the two filler materials or other ingredients.

Applicant agrees that the product literature cited by the Examiner illustrates silica powder can have a huge range of particle sizes from 0.2 micrometers to 600 micrometers.

  - **The Kamiyama reference does NOT disclose any reason to narrow the Examiner's huge range of filler particle sizes.**

- The Kamiyama reference does NOT describe any particle size for the filler particles.
- The Kamiyama reference does NOT describe any reason to use a particular filler particle size.
- The Kamiyama reference does NOT disclose any particular ratio of filler particle size to polymer particle size.
- The Kamiyama reference does NOT disclose any reason to use a particular range for ratio of filler particle size to polymer particle size.

- **Applicant's claim only a very narrow range of filler particle sizes.**

Pending claim 25 recites in one pertinent part: ". . . containing filler particles . . . with a particle size (d50) of 0.01 to 0.5 µm . . ."

- **It is more probable that the Kamiyama filler particle size falls outside of Applicant's claimed range than within Applicant's claimed range.**

Applicant concedes that a filler particle size must exist in the Kamiyama reference. However, it is simply not possible to discern any such size from the Kamiyama reference because, in contrast to its description of the polymer particles, *it never provides any size for the filler particles!* The fact that the filler particle size *can* be measured does not change the fact that *it never was measured.*

Given the Examiner's huge, range of filler particle sizes (0.2µm to 600 µm) why MUST the Kamiyama material have a filler particle size (d50) of 0.01 µm to 0.5 µm as claimed by Applicant? In fact, given the Examiner's huge, range of filler particle sizes it appears statistically more probable that the Kamiyama filler particle size falls outside of Applicant's narrow filler particle size range than within Applicant's narrow filler particle size range.

The doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient to establish inherency. Following the teachings of the Kamiyama reference cannot inevitably lead to Applicant's claimed filler particle size range. In fact, it appears more probable that the Kamiyama filler particle size will be different that Applicant's narrow filler particle size range. This rejection is traversed. If the Examiner maintains this rejection he must explain why the Kamiyama reference NECESSARILY discloses a filler particle size (d50) of 0.01 µm to 0.5 µm in view of the huge range of filler particle sizes admitted to be present by the Examiner. Applicant's pending claims 25-33 and 35 are not anticipated by the Kamiyama reference and are patentable for at least this reason.

In summary, Applicants have addressed each of the objections and rejections within the present Office Action. It is believed the application now stands in condition for allowance, and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

Roberto Pavez Aranguiz

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By: ______________
James E. Piotrowski
Registration No. 43,860
Attorney for Applicant

HENKEL CORPORATION
Legal Department
1001 Trout Brook Crossing
Rocky Hill, CT 06067
860.571.2501 (Office)
860.571.5028 (Fax)

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